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<120> HUMANIZED ANTIBODIES THAT RECOGNIZE VEROTOXIN II AND CELL LINE PRODUCING SAME

<130> 019026-000110US

<140> 09/700851

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<151> 1998-05-20

<160> 8

<170> PatentIn Ver. 2.1

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<223> Figure 1(A): Heavy chain variable region of mouse
 antibody VTm1.1 (MuVTm1.1).

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atg aac ttt gtg ctc agc tcg att ttc ctt gcc ctc att tta aaa gga 48 Met Asn Phe Val Leu Ser Ser Ile Phe Leu Ala Leu Ile Leu Lys Gly 1 5 10 15

gtc cag tgt gaa gtg cag ctg gtg gag tcg ggg gga ggc tta gtg aag 96 Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys 20 25 30

cct gga ggg ccc ctg aaa ctc tcc tgt gca gcc tct gga ttc act ttc 144
Pro Gly Gly Pro Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
35 40 45

agt agt tat ggc atg tct tgg gtt cgc cag act ccg gag aag agg ctg 192 Ser Ser Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu

gag tgg gtc gca acc att agt act ggt ggt agt tac acc tac tac cca 240 Glu Trp Val Ala Thr Ile Ser Thr Gly Gly Ser Tyr Thr Tyr Tyr Pro
65 70 75 80

288 gac agt gtg aag ggt cga ttc acc atc tcc aga gac aat gcc aag aac Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn 90 gcc ctg tat ctg caa atg agc agt ctg agg tct gag gac acg gcc ata 336 Ala Leu Tyr Leu Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Ile 105 110 100 tat tac tgt gca aga cgg ggg gac gca tgg ggt aac ttg gac tac tgg 384 Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp 120 ggt caa gga acc tct gtc acc gtc tcc tca 414 Gly Gln Gly Thr Ser Val Thr Val Ser Ser 135 130 <210> 2 <211> 138 <212> PRT <213> Mus musculus <223> Figure 1(A): Heavy chain variable region of mouse antibody VTm1.1 (MuVTm1.1). Met Asn Phe Val Leu Ser Ser Ile Phe Leu Ala Leu Ile Leu Lys Gly Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Leu Val Lys Pro Gly Gly Pro Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe 35 Ser Ser Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val Ala Thr Ile Ser Thr Gly Gly Ser Tyr Thr Tyr Tyr Pro 70 Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ala Leu Tyr Leu Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Ile 110 100 105 Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp 120 Gly Gln Gly Thr Ser Val Thr Val Ser Ser 135 <210> 3

<210> 3 <211> 381

<212> DNA

<213> Mus musculus

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<223> Figure 1(B): Light chain variable region of mouse
      VTm1.1 antibody (MuVTm1.1).
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Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser
gcc tcc aga ggt gat gtt gtg cta act cag tct cca gcc acc ctg tct
                                                                   96
Ala Ser Arg Gly Asp Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser
gtg act cca gga gat agc gtc agt ctt tcc tgc agg gcc agt caa act
Val Thr Pro Gly Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Thr
att agc aac aac cta cac tgg tat caa cac aaa tca cat gag tct cca
Ile Ser Asn Asn Leu His Trp Tyr Gln His Lys Ser His Glu Ser Pro
                         55
     50
agg ctt ctc atc aag tct gct tcc cag tcc atc tct ggg atc ccc tcc
Arg Leu Leu Ile Lys Ser Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser
                     70
                                         75
agg ttc agt ggc agt gga tca ggg aca gat ttc act ctc agt atc aac
                                                                   288
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn
                                     90
agt gtg gaa act gaa gat ttt gga atg tat ttc tgt caa cag agt tac
                                                                   336
Ser Val Glu Thr Glu Asp Phe Gly Met Tyr Phe Cys Gln Gln Ser Tyr
            100
                                                                   381
age tgg eeg etc aeg tte ggt get ggg ace aag etg gag etg aaa
Ser Trp Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
        115
<210> 4
<211> 127
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<223> Figure 1(B): Light chain variable region of mouse
      VTml.1 antibody (MuVTml.1).
<400> 4
Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser
                                                          15
                  5
                                      10
Ala Ser Arg Gly Asp Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser
Val Thr Pro Gly Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Thr
Ile Ser Asn Asn Leu His Trp Tyr Gln His Lys Ser His Glu Ser Pro
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55

50

Arg Leu Leu Ile Lys Ser Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser

70 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn 90 Ser Val Glu Thr Glu Asp Phe Gly Met Tyr Phe Cys Gln Gln Ser Tyr Ser Trp Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys 120 <210> 5 <211> 414 <212> DNA <213> Mus musculus <220> <221> CDS <222> (1)..(414) <223> Figure 2(A): Heavy chain variable region of humanized VTm1.1 antibody (HuVTm1.1). atg aac ttt gtg ctc agc tcg att ttc ctt gcc ctc att tta aaa gga Met Asn Phe Val Leu Ser Ser Ile Phe Leu Ala Leu Ile Leu Lys Gly gtc cag tgt gaa gtg caa ctg gtg gag tcg ggg gga ggc tta gtg cag Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Leu Val Gln 20 cct gga ggg tcc ctg aga ctc tcc tgt gca gcc tct gga ttc act ttc Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe 35 agt agt tat ggc atg tct tgg gtt cgc cag gct ccg ggt aag ggt ctg Ser Ser Tyr Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu 55 50 gag tgg gtc gca acc att agt act ggt ggt agt tac acc tac tac cca Glu Trp Val Ala Thr Ile Ser Thr Gly Gly Ser Tyr Thr Tyr Tyr Pro 75 65 70 gac agt gtg aag ggt cga ttc acc atc tcc aga gac aat tcc aag aac Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn 95 85 90 acc ctg tat ctg caa atg aac agt ctg agg gct gag gac acg gcc gta Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val 100 110 tat tac tgt gca aga cgg ggg gac gca tgg ggt aac ttg gac tac tgg

Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp

120

115

414 ggt caa gga acc tta gtc acc gtc tcc tca Gly Gln Gly Thr Leu Val Thr Val Ser Ser 130 <210> 6 <211> 138 <212> PRT <213> Mus musculus <223> Figure 2(A): Heavy chain variable region of humanized VTm1.1 antibody (HuVTm1.1). <400> 6 Met Asn Phe Val Leu Ser Ser Ile Phe Leu Ala Leu Ile Leu Lys Gly Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Thr Ile Ser Thr Gly Gly Ser Tyr Thr Tyr Tyr Pro Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp 115 Gly Gln Gly Thr Leu Val Thr Val Ser Ser 130 135 <210> 7 <211> 381 <212> DNA <213> Mus musculus <220> <221> CDS <222> (1)..(381)

<223> igure 2(B): Light chain variable region of humanized VTm1.1 antibody (HuVTm1.1) . atq qtt ttc aca cct cag ata ctt gga ctt atg ctt ttt tgg att tca Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser 5 10

												gcc Ala				96
												gcc Ala 45				144
												ggt Gly				192
												gly aaa				240
agg Arg	ttc Phe	agt Ser	ggc Gly	agt Ser 85	gga Gly	tca Ser	gly aaa	aca Thr	gat Asp 90	ttc Phe	act Thr	ctc Leu	act Thr	atc Ile 95	agc Ser	288
												caa Gln				336
												gag Glu 125				381

<210> 8

<211> 127

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<213> Mus musculus

<223> igure 2(B): Light chain variable region of humanized VTm1.1 antibody (HuVTm1.1) .

<400> 8

Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser 1 5 10 15

Ala Ser Arg Gly Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser 20 25 30

Val Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr
35 40 45

Ile Ser Asn Asn Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro 50 60

Arg Leu Leu Ile Lys Ser Ala Ser Gln Ser Ile Ser Gly Ile Pro Ala 65 70 75 80

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser 85 90 95

Ser Leu Glu Ser Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Tyr 100 105 110

Ser Trp Pro Leu Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys 115 120 125